

**DETAILED ACTION**

***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because it was not executed in accordance with either 37 CFR 1.66 or 1.68: The second inventor's signature is missing.

***Claim Objections***

Claims 19 and 20 objected to because of the following informalities:

Claims 19 and 20, line 1, the phrase "the or" is extraneous.

Claim 20, the use of the terms "preferably" and "most preferably" is improper.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 9-11, 15-18 and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Schilling et al. (DE 10127979 C1). Please refer to (US 2004/0130780 A1) for translation.

Regarding claims 1-6 and 9, 15, 21, 22, Schilling discloses a security device comprising a holographic or diffractive optically variable effect generating structure (see paragraph [0016]) which, when viewed normally i.e. perpendicularly to the plane of the device, replays at least one composite image (11 of Fig.'s 2, 6-8), the composite image being defined by at least a pair of discrete image elements (12, 13 and 14 of Fig. 2), the structure being such that at least two of the discrete image elements of the composite image have different optimal replay angles wherein the structure replays at least two different composite images, each composite image being defined by at least two respective discrete image elements, the structure being such

that at least two of the discrete image elements of each composite image have different optimal replay angles (i.e., due to tilting and rotation, See paragraph [0018]).

Regarding claim 10, Schilling discloses the optically variable effect generating structure comprising a surface relief microstructure (4 of Fig. 1).

Regarding claim 11, Schilling discloses the structure including a fully or partially reflective layer (line 38 of paragraph [0017]).

Regarding claim 16, Schilling discloses at least one discrete image element defining a symbol (See Fig.'s 6 and 7).

Regarding claims 17 and 18, Schilling discloses two or more symbols which complement one another (See Fig. 8).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 8 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling.

Schilling discloses the claimed invention except for the explicitly teaching:

- Both discrete image elements have substantially the same colour when viewed normally.
- The outline discrete image element comprises a background image common to both composite images.
- The structure being formed on or in a partially demetallised foil patch or stripe.
- The datum image appears within or overlaps at least one of the composite images.

However, such specific features are related to the intended implementation of the security document and can be achieved by routine experimentation which does not serve as basis for patentability.

It would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to discover such features in order to implement the security device in different applications (banknotes, credit cards, passports... etc).

Claims 19, 20, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling in view of Kaule et al. (US 4892336) or Drinkwater et al. (US 5,712,731).

Schilling discloses the claimed invention except for each composite image having a maximum lateral dimension in the range 2-3mm and a thread incorporating the security device.

However, such features are taught by Kuale et al. and Drinkwater et al.

It would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to adapt the security device of Schilling in the inventions of Kaule or Drinkwater so as to achieve practical solution suitable for mass production of security protected threads in banknotes.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Drinkwater (US 2005/0270604 A1).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye G. Assaf whose telephone number is (571) 272-2307. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fayez G. Assaf/  
Primary Examiner, Art Unit  
2872

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